

Alternative Fuel Truck Application Program— enabling the use of cleaner, domestically-sourced fuels in the heavy-duty transport sector

Heavy-duty trucks are the backbone of the American economy, moving nearly all food and manufactured products to the marketplace cost-effectively, efficiently and reliably. But like vehicles in many other sectors of the economy, heavy-duty vehicles must soon begin meeting stricter federal emissions regulations in order to stay in operation.

Thousands of operators in a crucial segment of the American economy will be faced with a decision on how to best meet these requirements. Their options may include cleaner, advanced diesel fuels currently being developed by the petroleum industry; new diesel engine technologies being developed through efforts such as the Heavy-Duty Engine Development Program under the U.S. Department of Energy (DOE); or use of one of several alternative fuels.

Although the use of alternative fuels such as alcohols, natural gas and propane is not federally mandated for heavy-duty vehicles—as they are for cars and light-duty vehicles—alternative fuels may offer operators a cost-effective means for meeting the requirements. In addition, many operators may be faced with local or state laws which do mandate use of alternative fuels—another factor they'll need to consider. And, they may find that use of domestically-sourced alternative fuels may be the best option for aligning themselves with America's energy security goals.

To help give operators some of the information they need to make an informed decision, DOE is working with numerous industrial and municipal partners to study the use of different alternative



Ethanol-powered snowplow operating in Hennepin County, MN

fuels in heavy-duty vehicles. This body of information is also provided to engine manufacturers to assist them in their R&D efforts and in optimizing new technologies.

Helping generate and disseminate needed information

The Alternative Fuel Truck Application Program is designed to collect data from as many different sectors using as many different types of vehicles and fuels in as many geographical areas as possible. Program-supported fleets, for example, encompass delivery trucks to tractor trailers, running on diversity of fuels including methanol, ethanol, natural gas, propane and clean diesel. Fleets are located from California to New York and from Florida to Minnesota, and include operators as diverse as Federal Express, Roadway Trucking, Tampa Electric and Coors Brewing Company.

The Program gathers information from fleets under a number of different funding arrangements. Some are fully cost-shared by DOE. Others are fleets encouraged to begin their own "prove-out" programs by DOE paying the cost differential between conventional vehicles and alternative-fuel vehicles. Still others are not DOE-funded, but are structured to share information back and forth under different types of agreements.

User-liaison organizations are another important component of the effort. For example, the American Trucking Association, which represents hundreds of fleet owners, shares DOE-collected information with its members, and also makes data available from other programs for wider dissemination.

The Program also includes a component aimed at gathering data on school buses, refuse haulers, street sweepers and other heavy-duty municipal vehicles. This effort likewise includes fleets from all across the country operating under different funding agreements. Participants include Tulsa County, Oklahoma; Wood County, West Virginia; the Town of Weston, Massachusetts; and Maricopa County, Arizona.

Information collected from Program efforts flows to the Alternative Fuels Data Center, where it can be accessed by the private sector. Information is also disseminated through the National Alternative Fuels Hotline (1-800-423-1DOE).

Helping advance the state-of-the-art

One of the objectives of the Program is to encourage manufacture of original equipment heavy-duty alternative-fuel vehicles, as opposed to converted vehicles. For this reason, the Program has developed close ties with major engine manufacturers to provide them with in-use information on their alter-

native-fuel products—many of them in the prototype or pre-commercial stage.

Engines developed by major U.S. heavy-duty engine manufacturers including Detroit Diesel Corporation (DDC), Caterpillar, Cummins, Hercules and Tecogen are included in DOE-supported fleets. Current R&D efforts include DDC's natural gas-powered diesel engine and Caterpillar's multi-fuel alcohol diesel engine.

Paving the way for greater alternative fuels use—and greater energy security

Congress has directed DOE to help drive alternative fuels so that they "reach a threshold level of commercial application and consumer acceptability at which they can successfully compete with petroleum-based fuels." Aimed at making these goals a reality in the trucking and related sectors, this Program will help provide potential users with the real-world cost, emissions and performance data they need to confidently invest in new technologies, as well as help improve available technologies, thereby helping to create a viable alternative-fuel vehicle industry and infrastructure.

In so doing and in the larger sense, the Program will help meet the key goals of America's energy-related legislation—to improve national security by using more domestically-produced fuels and less imported petroleum, while improving environmental performance and creating new job-producing industries.

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